Development of an online platform to support self-management of symptoms and promote wellbeing of people with cardiovascular disease

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SilverCloud

SBRI Healthcare

Bringing new technologies to the NHS

King’s College London
Background

- CVD is the leading cause of disability & mortality
- Distress exacerbates perceived severity of chest pain, palpitations, breathlessness, fatigue
- There is no cure, so self management is key. But support, especially for distress, is limited
- Online interventions: ↓cost, ↑access, ↓stigma
- Current online interventions are not CVD specific
Objective
To develop an online psyched/therapeutic CVD-specific intervention for self-management & wellbeing support

Methods

• Review & adapt existing evidence based materials, test acceptability & usability

  Focus Group Discussion (n = 10m)

  Think Aloud Usability Testing (n = 2, 1m/1f)

  Cross-Sectional Study (ongoing, n = 10)
Development

We reviewed:

• Existing resources including materials used in IAPT
• Literature (research/self-help books) on CBT/BT/self-management
• NICE guidelines
• Websites including NHS choices & BHF

➢ Info used to adapt SilverCloud material & develop new CVD specific modules
Focus Group Discussion

Participants agreed the proposed intervention is:
Flexible/personalised & info is relevant/reliable/accessible
No existing resource meets all (physical/emotional/info) needs

“*You get conflicting advice from people*” [P3]

“The way you interpret it & manage your life varies absolutely as an individual” [P8]

Participants wanted:
An option to read more/less
More info on: recognising heart attacks, diabetes & support

“All people are really interested in the full story & others like me would be interested in broad guidance.” [P3]

“The difficulty is you do the expert course which just looks at your diabetes & you do the postoperative cardiac care which just looks at your cardiac care & nobody ever puts the two together” [P6]
Intervention

5 Modules (behavioural/cognitive behavioural):

Self-Management: 1) Medication, appointments, lifestyle
Symptom Management - role of TFB in:
2) Chest pain/palpitations  3) Fatigue  4) Breathlessness
Distress: 5) CBT for anxiety/depression/stress

Features:
• Platform - media-rich, web 2.0: SilverCloud
• Supporter function – to ↑ engagement/feedback
• Interactive – alerts/quiz/homework/activity schedule
• Personalised – flexible & Evidence based
• Chest pain/palpitations, fatigue & breathlessness are common in CVD
• Some patients experience symptoms which have no detectable origin
• Symptoms chronic/cause distress
• Distress exacerbates these symps & are assoc’d with poor outcomes
• This can lead to ↑ healthcare usage
• Symptoms can be managed
Existing SilverCloud apps & tools have been adapted & new tools developed such as the tracking tool.
Using the tracker tool, users can schedule activities and monitor what type of activities they have done that day/week.

<table>
<thead>
<tr>
<th>Time</th>
<th>Activity</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>07:00</td>
<td>Walk to work</td>
<td>Physical Activity</td>
</tr>
<tr>
<td>08:00</td>
<td>Work at desk</td>
<td>Brainwork</td>
</tr>
<tr>
<td>09:00</td>
<td>Coffee break</td>
<td>Rest</td>
</tr>
<tr>
<td>10:00</td>
<td>Work at desk</td>
<td>Brainwork</td>
</tr>
<tr>
<td>12:00</td>
<td>Lunch with friends</td>
<td>Enjoyable Activity, Healthy Eating, Enjoyable Activity</td>
</tr>
<tr>
<td>13:00</td>
<td>Get the bus home</td>
<td>Woke-Up, Eating, Chores, Sleep, Rest</td>
</tr>
</tbody>
</table>

Example of One Week Activity Tracking:

- **Mon**: Got up at 8, had breakfast and got dressed.
- **Tue**: Went to the dentist.
- **Wed**: Cleaned the house, went to 10:30 and dressed.
- **Thu**: Got up at 10:30 and dressed.

Categories used in the example diary:

- Enjoyable Activity
- Physical Activity
- Healthy Eating
- Went to Sleep
- Relaxation
- Woke-Up
- Eating
- Chores
- Sleep
- Rest

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Testing the intervention

Think Aloud Usability Testing

The intervention was easy to use & the content appropriate
Suggested changes included ↑ font size, ↓ amount of text

“Rings significant bells” [P1]  “Good information, very easy to understand.” [P2]

→ user-informed improvements

Cross-Sectional Study - In Progress

Usage data overall & for each module are being collected
Participants will be asked about their experience
Conclusions

- Online therapy is effective for distress
- Generic packages not acceptable for people with co-morbid physical health problems
- SilverCloud online solution for CVD addresses risk factors/symptoms & distress to improve self-management and well being
- We are continuing to develop this intervention & are preparing for a future trial